

REMARKS

Claims 1-33 are pending in the present application. By this Response, claims 31-33 are added. Support for these additional claims may be found at least in Figure 5 and the corresponding description in the specification. Reconsideration of the claims in view of the following remarks is respectfully requested.

I. 35 U.S.C. § 103, Alleged Obviousness

The Office Action rejects claims 1-30 under 35 U.S.C. § 103(a) as being allegedly unpatentable based on Lesaint et al. (U.S. Patent No. 6,578,005) in view of Kaufer (U.S. Patent No. 6,519,763). This rejection is respectfully traversed.

As to independent claim 1, the Office Action states:

Per claims 1, 11 and 21, a method of actively scheduling a time based event driven process (Lesaint, col. 3, lines 11-23, the system is conveniently arranged so that optimized schedules are generated periodically, the modification process making short term changes in between the generation of such schedules), comprising:  
Receiving status update information (col. 2, line 60 to col. 3, line 4, updating means for receiving, from the input means, updated information relating to the tasks and resources);  
Adapting an initial schedule of the time based event driven process based on the status update information to thereby generate an adapted schedule (col. 3, lines 5-11, whereby changes to the initial schedules may be made in response to such updated information, independently of the schedule generation means), and modifying the adapted schedule to thereby generate a modified schedule for the time based event driven process (col. 2, line 60 to col. 3, line 28, and modifying means for modifying the initial schedule of at least a first resource in response to such updated information, whereby changes to the initial schedules may be made in response to such updated information, independently of the schedule generation means).

Lesaint does not explicitly teach of modifying the schedule based on "historical information".

Kaufer teaches a schedule change tracked over time with predicting schedule dates and various trends in product development, for the purpose of tracking the schedule change over time and enabling the user to identify how the project deadline changed over time. It would have been obvious for a person ordinary skill in the art at the time the invention was made to

modify the reference of Lesaint with historical information based line scheduling change of Kaufer for the purpose of tracking the schedule change over time and enabling the user to identify how the project deadline changed over time.

Office Action dated June 17, 2004, pages 2-3 (emphasis added).

Claim 1, which is representative of the other rejected independent claims 11 and 21 with regard to similarly recited subject matter, reads as follows:

1. A method of actively scheduling a time based event driven process, comprising:
  - receiving status update information;
  - adapting an initial schedule of the time based event driven process based on the status update information to thereby generate an adapted schedule; and
  - modifying the adapted schedule based on historical information to thereby generate a modified schedule for the time based event driven process. (emphasis added)

It is important to first note that claim 1 includes an initial schedule, an adapted schedule and a modified schedule. The adapted schedule is a modification of the initial schedule based on status update information. The modified schedule is a modification of the adapted schedule based on historical information. Applicants respectfully submit that neither Lesaint nor Kaufer, whether taken alone or in combination, teach such structures or the process for generating such structures.

Lesaint is directed to a method and apparatus for resource allocation when schedule changes are incorporated in real time. Initial schedules for tasks are generated periodically and may be modified when the update information is received. The schedule modification involves a plurality of selection steps. In each selection step, the plurality of tasks waiting to be performed are assessed to determine if a task of a given priority suitable for performance by a first resource (typically, one which has reported in requesting a new task) is available. The task is then allocated to the first resource if identified. The selection steps are arranged to identify tasks of successively descending priority (column 4, lines 62 to column 5, line 2). An example of this modification is provided in column 5, lines 11-33.

Thus, Lesaint teaches a system in which initial schedules are generated and then as resources become available, other tasks are allocated to the resources based on priorities associated with those tasks. As recognized by the Office Action, Lesaint fails to teach modifying an adapted schedule based on historical information. However, the Office Action alleges that this feature is taught by Kaufer.

Kaufer is directed to a web based system for time management and task completion and prediction software. With Kaufer, task and milestone information is obtained using dialog boxes shown in Figures 3 and 4. Kaufer does teach task baseline history tables (see column 10, lines 39-52 and column 12, lines 53-65). These task baseline history tables are used to provide the ability to see how the task schedule over time. However, nowhere in Kaufer is there any teaching or even suggestion to use this task baseline history table information to actually modify a schedule that is an adaptation of an initial schedule based on update information. To the contrary, the task baseline history table is used only to provide information for how a task's baseline dates change over time and, if necessary, to calculate a deviation from the original date (column 10, lines 41-43). In fact, all Kaufer does is determine estimated completion times and send alerts when these estimated completion times meet certain criteria (see columns 15-16). Kaufer does not modify any schedules based on history information.

Since neither Lesaint nor Kaufer teach or suggest this feature, any alleged combination of Lesaint and Kaufer still would not teach or suggest this feature. To the contrary, a combination of Lesaint and Kaufer would result in a system substantially as taught by Lesaint, i.e. a system in which tasks are assigned to resources based on priorities, in which the scheduled dates of the tasks as they change are maintained in a history table. The result of the combination still would not provide a method in which an initial schedule is adapted based on update information to generate an adapted schedule and this adapted schedule is modified based on history information to generate a modified schedule.

Even the motivation offered by the Office Action illustrates that fact that the combination of Kaufer and Lesaint would not result in the presently claimed invention. According to the Office Action, the motivation to combine Kaufer with Lesaint "is for the purpose of tracking the schedule change over time and enabling the user to identify

how the project deadline changed over time.” Thus, the alleged purpose for adding the features of Kaufer to Lesaint isn’t to modify an adapted schedule based on history information but rather to permit a user to track schedule changes over time. The motivation does not even address why it would be obvious to add the features of Kaufer to Lesaint to result in a method that modifies an adapted schedule, that is adapted from an initial schedule based on update information, based on history information to generate a modified schedule.

In view of the above, Applicants respectfully submit that neither Kaufer nor Lesaint, either alone or in combination, teaches or suggests all of the features of independent claims 1, 11 and 21. At least by virtue of their dependency on claims 1, 11 and 21, Applicants respectfully submit that neither Kaufer nor Lesaint, either alone or in combination, teach or suggest the features of dependent claims 2-10, 12-20 and 22-30. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 1-30 under 35 U.S.C. § 103(a).

In addition to the above, neither Kaufer nor Lesaint, either alone or in combination, teach or suggest the specific features of dependent claims 2-10, 12-20 and 22-30. For example, with regard to claims 8, 18 and 28, neither reference teaches or suggests determining if the status update information indicates that an event has been resolved within a window of opportunity associated with the event or performing the steps of adapting and modifying only when the event has not been resolved within the window of opportunity. Kaufer and Lesaint do not even mention a window of opportunity associated with an event let alone the specific features of claims 8, 18 and 28 that reference a window of opportunity associated with an event.

The Office Action alleges that these features are taught by Lesaint at column 4, lines 11-23 which reads as follows:

This architecture allows scheduling to be carried out in several stages, with more changeable, but casier to allocate, tasks being handled in a different manner to tasks which are more difficult to allocate, but less subject to change. The system is conveniently arranged so that optimised schedules are generated periodically, the modification process making short term changes in between the generation of such schedules. This allows the schedule generation process more time to generate each

schedule, allowing it to generate a more optimal solution, and/or use more data (e.g. further ahead in time) than would be the case if its run time were constrained by a need to track short term changes in real time.

This section of Lesaint does not teach anything having to do with windows of opportunity associated with events, determining if an event has been resolved within a window of opportunity associated with the event, or adapting and modifying being performed only when the event has not been resolved within the window of opportunity. All this section of Lesaint teaches is that optimized schedules are generated periodically and that short term changes may be made between generation of optimized schedules. This is provided in Lesaint so that more time may be permitted for the generation of optimized schedules. This is important in Lesaint because Lesaint generates schedules in real time. None of this has anything to do with determining if an event has been resolved within a window of opportunity associated with an event or adapting and modifying schedules only when the event has not been resolved within the window of opportunity.

Thus, despite the allegations made in the Office Action, Lesaint, in actuality, does not teach or even suggest the features of claims 8, 18 and 28. Kaufer, likewise, does not teach or suggest these features. Therefore, any alleged combination of Lesaint and Kaufer, even if such a combination were somehow possible and one were somehow motivated to attempt the combination, would not result in the invention as recited in claims 8, 18 and 28. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 8, 18 and 28 under 35 U.S.C. § 103(a).

Regarding claims 9, 19 and 29, neither reference teaches or suggests that modifying an adapted schedule based on historical information includes predicting whether another event will interfere with an event in the adapted schedule based on the historical information. The Office Action alleges that Kaufer teaches this feature at column 10, lines 31-52 which reads as follows:

A schedule baselines history table stores baseline information about a given schedule. This data is not stored in the schedule's table. For example, the baselines history table is completed by the data collector if the baseline information is present in the Microsoft Project schedule. In the event a user is utilizing Microsoft Project software and the information regarding the baseline is present in the schedule, the information for the

baseline is completed by the data collector file. The schedule baseline history tables are updated when a baseline changes, i.e. when new rows are added to this table reflecting new baseline dates. This allows a user to track changes to the baseline dates over time and, if necessary, to calculate a deviation from the original date. In addition, the system comprises a schedule baseline table which is similar in appearance and configuration to the schedule baseline history table, except that the schedule baseline table omits the date. This specific schedule baseline table allows for comparison of current start and end dates with the current baseline start and end dates for the project. Accordingly, in addition to tasks, the overall prediction date for each schedule is also stored in a schedule predictions table.

This section of Kaufer merely teaches that the schedule baseline history tables store baseline dates for tasks. When the baseline date for a task changes, a new entry is added to the schedule baseline history table for that task. In this way, the changes to the baseline date for a task may be tracked over time.

There is nothing in Kaufer, let alone the specific section cited by the Office Action, that teaches determining if events conflict, i.e. if one event will interfere with another event. All Kaufer does is maintain a list of baseline dates for tasks. Kaufer provides no teaching or suggestion regarding predicting whether another event will interfere with an event in an adapted schedule based on historical information. While the above section states that "this specific schedule baseline table allows for comparison of current start and end dates with the current baseline start and end dates for the project" this is merely referring to the overall purpose of Kaufer which is to send alerts when a particular task completion date differs from an original completion date by a predetermined amount. The "comparison" mentioned here is not a comparison to determine if an event will interfere with an event in an adapted schedule based on historical information.

Thus, despite the allegations made in the Office Action, Kaufer, in actuality, does not teach or even suggest the features of claims 9, 19 and 29. Lesaint, likewise, does not teach or suggest these features. Therefore, any alleged combination of Lesaint and Kaufer, even if such a combination were somehow possible and one were somehow motivated to attempt the combination, would not result in the invention as recited in claims 9, 19 and 29. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 9, 19 and 29 under 35 U.S.C. § 103(a).

With regard to claims 10, 20 and 30, neither reference teaches or suggests determining if two or more events of a modified schedule may be combined or combining two or more events into a combined event if it is determined that the two events may be combined. Neither reference makes any mention of combining events, let alone determining if events can be combined in a modified schedule, which is an adapted schedule (adapted based on update information) that is modified based on historical information.

The Office Action admits that Lesaint does not teach combining two events when it is determined that events of a modified schedule can be combined. The Office Action then makes the statement "Lesaint teaches of a system that optimized schedules are generated periodically in order to allow to give the schedule generation process more time to generate each schedule." The Office Action then somehow comes to the conclusion that the features of claims 10, 20 and 30 are obvious "for the reason to give the schedule generation process more time to generate each schedule." This does not even address the features of claims 10, 20 and 30.

How does combining events in a schedule of events give more time to generate a schedule? To the contrary, determining whether to combine events and then actually combining the events increases the amount of time necessary to make a schedule and thus, there would be less time available for generating the schedule. The motivation offered by the Office Action has no valid basis in any of the teachings of the references and is an attempt to conjure up a rejection when there really is no basis for one. The rejection is completely improper and should be withdrawn.

The Office Action is right when it says that Lesaint does not teach combining events in a schedule. In fact, it is noted that in every other rejection of a claim in the Office Action, the Office Action points to a portion of the reference that allegedly teaches the features of the claims (even though the Office Action may be incorrect that such sections actually teach the features of the claim), yet with regard to claims 10, 20 and 30, there is no such portion of any reference that is referred to. This is because there is not a single statement in either reference that even remotely hints at the features of claims 10, 20 and 30. Nowhere is there any teaching or suggestion to first determine whether two events can be combined and then combine those events if it is determined that they can be

combined. Only the present invention performs such functions and the Office Action has failed to show where these features are made obvious by anything in either reference.

Thus, despite the allegations made in the Office Action, Lesaint, in actuality, does not teach or even suggest the features of claims 10, 20 and 30. Kaufer, likewise, does not teach or suggest these features. Therefore, any alleged combination of Lesaint and Kaufer, even if such a combination were somehow possible and one were somehow motivated to attempt the combination, would not result in the invention as recited in claims 10, 20 and 30. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 10, 20 and 30 under 35 U.S.C. § 103(a).

## II. Newly Added Claims 31-33

Claims 31-33 are added to recite additional features of the present invention. In particular, claims 31-33 are added to clarify that the event driven process is a process that is comprised of a plurality of scheduled events wherein a change to a performance time of one scheduled event in the plurality of scheduled events affects a performance of another scheduled event at its initially scheduled time of performance. In addition, these claims recite that adapting an initial schedule includes modifying a time of performance of a first scheduled event in the plurality of scheduled events and then modifying a time of performance of a second scheduled event in the plurality of scheduled events based on the modification to the first scheduled event's performance time. Moreover, these claims recite that modifying the adapted schedule based on historical information includes modifying one of the modified first scheduled event performance time and the modified second scheduled event performance time based on the historical information.

Neither Lesaint nor Kaufer teach or suggest such features. To the contrary, while Lesaint mentions "linked tasks" the modification of schedules is performed on a one-by-one basis based on a priority of tasks waiting and the available resource. Similarly, while Kaufer teaches maintaining history information about the changes in baseline start times of tasks, this history information is not used to modify the performance time of a scheduled event, the performance time having already been modified based on update information. Thus, claims 31-33, in addition to being dependent on their respective



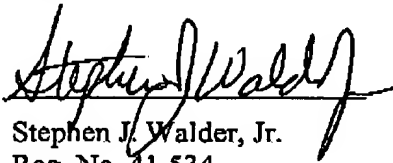
independent claims, are allowable over the alleged combination of Lesaint and Kaufer by virtue of the specific features recited in these claims.

### III. Conclusion

It is respectfully urged that the subject application is patentable over the prior art of record and is now in condition for allowance. The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,



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